



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/606,057	06/28/2000	Gerard Chauvel	TIF-15767A.1	8397

7590 06/18/2002

Texas Instruments Incorporated  
Attn William E Hiller  
P O Box 655474 M/S 219  
Dallas, TX 75265

EXAMINER

TRAN, DENISE

ART UNIT	PAPER NUMBER
----------	--------------

2186

DATE MAILED: 06/18/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/606,057

Applicant(s)

GHAUVEL ET AL.

Examiner

Denise Tran

Art Unit

2186

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 09 April 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 6,8,10 and 12-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 6,8,10 and 12-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☒ Certified copies of the priority documents have been received in Application No. 07/902191.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

Art Unit: 2186

### FINAL ACTION

1. The applicant's amendment filed 4/9/02 has been considered. Claims 6, 8, 10, 12-13, and new added claims 14-21 are presented for examination. Claims 1-5, 7, 9, and 11 have been canceled.

2. The objection to the disclosure is withdrawn due to the applicant's arguments.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 6, 8, 10, 13-14, 16-17, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Paneth et al., U.S. Patent No. 6,282, 180 B1, (hereinafter Paneth), and further in view of Barnes et al., U.S. Patent No. 4,829, 554, (hereinafter Barnes).

As per claim 6, Paneth teaches the invention substantially as claimed, a radio, comprising: a first processor being the main processor of the radio (e.g., fig.2, el. 24 or 18 or 20 or fig.3, el. 27 or el. 28 or 29; and col. 8, line 54 and et seq. ); a second processor coupled to the first processor wherein said second processor performs protocol processing (e.g., fig.2, el.18 or fig.3, el. 29; and col. 8, lines 22-24); a third processor coupled to the first processor wherein the third processor performs signal

Art Unit: 2186

processing on vectors processing (e.g., fig.3, el. 33 or 30a or fig. 25, el. 154; col. 71, line 64 and et seq.). Paneth does not explicitly show the use of cellular. Barnes, e.g., abstract, lines 1-4, is shown as an example that a cellular radio being well known in the art. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have a cellular radio to the system of Paneth because it would allow distribution of many of the control functions to cell stations associated with cells; thereby, monitoring and voice communication functions provides both security from interrupted service and significant reduced costs.

As per claim 8, 10, 13, and 16, Paneth teaches wherein said first processor performs management and vocoder signal processing (e.g., fig.2, el. 24 or 17 or 20 or fig.3, el. 28 or 29 ; col. 7, line 63 and et seq. or col. 41, line 31); wherein the second processor is a dedicated processor adapted to bit processing (e.g., fig.2, el. 24 or 16 or 18 or 20 or fig.3, el. 27 or 28 or 29 or fig. 25, el. 154; col. 17, line 40 and et seq.); wherein the three processors operate in parallel (e.g., abstract, line 1 and et seq.); and wherein the first processor is a DSP (e.g., col. 42, lines 53-60).

As per claim 14, Paneth teaches the invention substantially as claimed, a radio, comprising: a first processor performing management and vocoder signal processing (e.g., fig.2, el. 24 or 17 or 20 or fig.3, el. 28 or 29 ; col. 7, line 63 and et seq. or col. 41, line 31); a second processor coupled to the first processor wherein said second processor performs protocol processing (e.g., fig.2, el.18 or fig.3, el. 29; and col. 8, lines 22-24); a third processor coupled to the first processor wherein the third processor performs signal processing on vectors (e.g., fig.3, el. 33 or 30a or fig. 25, el. 154; col.

Art Unit: 2186

71, line 64 and et seq.). Paneth does not explicitly show the use of cellular. Barnes, e.g., abstract, lines 1-4, is shown as an example that a cellular radio being well known in the art. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have a cellular radio to the system of Paneth because it would allow distribution of many of the control functions to cell stations associated with cells; thereby, monitoring and voice communication functions provides both security from interrupted service and significant reduced costs.

As per claims 17 and 19, Paneth teaches wherein the first processor is a DSP (e.g., col. 42, lines 53-60); wherein the second processor is a dedicated processor adapted to bit processing (e.g., fig.2, el. 24 or 16 or 18 or 20 or fig.3, el. 27 or 28 or 29 or fig. 25, el. 154; col. 17, line 40 and et seq.).

5. Claim 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Paneth et al., U.S. Patent No. 6,282, 180 B1, (hereinafter Paneth), and in view of Barnes et al., U.S. Patent No. 4,829, 554, (hereinafter Barnes), and further in view of Claesson et al., a Multi-DSP implementation of a Broad-Band Adaptive Beamformer for Use in a Hands-Free Mobile Radio Telephone, pages 194-200, 02/1991 (hereinafter Claesson).

As per claim 16, , Paneth teaches the first processor being the main processor of the radio (e.g., fig.2, el. 24 or 18 or 20 or fig.3, el. 27 or 29; and col. 8, line 54 and et seq. ). Paneth does not explicitly show the above processor being a DSP. Claesson shows the use of a DSP (e.g., col. 2, page 194 to col. 1, page 195) in a radio system. It

Art Unit: 2186

would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the teaching of Claesson into the combines system of Paneth and Barnes because it would allow a highest performance, available in various forms and performance levels from all major semiconductor manufacturers, increase execution speed and keep the cost reasonable, as taught by Claesson(e.g., col. 2, page 194 to col. 1, page 195).

As per claim 17, Paneth teaches the first processor performing management and vocoder signal processing (e.g., fig.2, el. 24 or 20 or fig.3, el. 29 ; col. 7, line 63 and et seq. or col. 41, line 31). Paneth does not explicitly show the above processor being a DSP. Claesson shows the use of a DSP (e.g., col. 2, page 194 to col. 1, page 195) in a radio system. It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the teaching of Claesson into the combines system of Paneth and Barnes because it would allow a highest performance, available in various forms and performance levels from all major semiconductor manufacturers, increase execution speed and keep the cost reasonable, as taught by Claesson(e.g., col. 2, page 194 to col. 1, page 195).

6. Claim 12, 15, 18, and 20-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Paneth et al., U.S. Patent No. 6,282, 180 B1, (hereinafter Paneth), in view of Barnes et al., U.S. Patent No. 4,829, 554, (hereinafter Barnes), and further in view of Mano, Computer System Architecture, Prentice-Hall Inc., pages 282-284, 1982 (hereinafter Mano).

Art Unit: 2186

As per claims 12 and 21, Paneth does not explicitly show the use of an array processor. Mano as an example shows that both the concept and advantages of having a processor being an array processor are well known and expected in the art (page 282). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Mano with the combined system of Paneth and Barnes because it would provide for parallel computations on large arrays, thereby increasing system computation power.

As per claim 15, Paneth teaches the invention substantially as claimed, a radio, comprising: a first processor performing management and vocoder signal processing (e.g., fig.2, el. 24 or 17 or 20 or fig.3, el. 28 or 29 ; col. 7, line 63 and et seq. or col. 41, line 31); a second processor coupled to the first processor wherein said second processor performs protocol processing (e.g., fig.2, el.18 or fig.3, el. 29; and col. 8, lines 22-24); a third processor coupled to the first processor wherein the third processor performs signal processing (e.g., fig.3, el. 33 or 30a or fig. 25, el. 154; col. 71, line 64 and et seq.). Paneth does not explicitly show the use of cellular. Barnes, e.g., abstract, lines 1-4, is shown as an example that a cellular radio being well known in the art. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have a cellular radio to the system of Paneth because it would allow distribution of many of the control functions to cell stations associated with cells; thereby, monitoring and voice communication functions provides both security from interrupted service and significant reduced costs. Paneth does not explicitly show the use of an array processor. Mano as an example shows that both the concept and

Art Unit: 2186

advantages of having a processor being an array processor are well known and expected in the art (page 282). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Mano with the combined system of Paneth and Barnes because it would provide for parallel computations on large arrays, thereby increasing system computation power.

As per claims 18 and 20, Paneth teaches wherein the first processor is a DSP (e.g., col. 42, lines 53-60); wherein the second processor is a dedicated processor adapted to bit processing (e.g., fig.2, el. 24 or 16 or 18 or 20 or fig.3, el. 27 or 28 or 29 or fig. 25, el. 154; col. 17, line 40 and et seq.).

7. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Paneth et al., U.S. Patent No. 6,282, 180 B1, (hereinafter Paneth), in view of Barnes et al., U.S. Patent No. 4,829, 554, (hereinafter Barnes), further in view of Mano, Computer System Architecture, Prentice-Hall Inc., pages 282-284, 1982 (hereinafter Mano), and further in view of Claesson.

As per claim 18, Paneth teaches the first processor performing management and vocoder signal processing (e.g., fig.2, el. 24 or 20 or fig.3, el. 29 ; col. 7, line 63 and et seq. or col. 41, line 31). Paneth does not explicitly show the above processor being a DSP. Claesson shows the use of a DSP (e.g., col. 2, page 194 to col. 1, page 195) in a radio system. It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the teaching of Claesson into the combines system of Paneth and Barnes because it would allow a highest performance, available in various



Art Unit: 2186

forms and performance levels from all major semiconductor manufacturers, increase execution speed and keep the cost reasonable, as taught by Claesson(e.g., col. 2, page 194 to col. 1, page 195).

8. Applicant's arguments filed 4/9/02 have been fully considered but they are not persuasive.

9. In the remark, the applicants argued (1) that Paneth fails to suggest that processor 20 is the main processor of the base station or of any cellular radio.

In response to the applicant's argument (1). The combination of Paneth and Barnes teaches the first processor being main processor of a cellular radio as stated above in the rejection with respect to claim 6. In particular, Paneth teaches that processor 20 is the main processor of the base station (e.g., col. 8, line 54 and et seq.).

10. In the remark, the applicants argued that Paneth fails to suggest wherein the first processor performs management and vocoder signal processing as required by claims 14 and 15. Also, the vocoder function is performed by the codecs in VCU 17 not in RPU 20.

In response to the applicant's arguments (2), Paneth teaches a first processor performing management and vocoder signal processing (e.g., fig.2, el. 24 or 17 or 20 or fig.3, el. 28 or 29 ; col. 7, line 63 and et seq. or col. 41, line 31). For example, Paneth

Art Unit: 2186

teaches el. 20 performing management and vocoder signal processing by controlling the performance vocoder signal processing, the interconnections between the codecs<sup>16</sup> (e.g., col. 8, lines 56-63).

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., the vocoder function is performed by the codecs in VCU 17 not in RPU 20) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

11. In the remark, the applicants argued (3) that Paneth 's fig. 3 fails to teach the main processor of the cellular radio; the second processor performing protocol processing; the third processor performing signal processor on vectors as required by claim 6.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). For this case, the combination of Paneth and Barnes teach the main processor of the cellular radio; the second processor performing protocol processor; the third

Art Unit: 2186

processor performing signal processor on vectors as stated above in the rejection with respect to claim 6.

For example, in the broadest interpretation of the claim, el. 27, fig. 3 of Paneth reads on the main processor limitation of the claim; el. 29, fig. 3 of Paneth reads on the processor performing protocol processing limitation of the claim; and fig.3, el. 33 or 30a or fig. 25, el. 154; col. 71, line 64 and et seq. reads on the processor performing signal processor on vectors limitation of the claim.

12. In the remark, the applicants argued that Paneth 's fig. 3 fails to teach a cellular radio, comprising: a first processor for performing management and vocoder signal processing; the second processor performing protocol processing; the third processor performing signal processor on vectors as required by claim 14.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). For this case, the combination of Paneth and Barnes teach the main processor of the cellular radio; the second processor performing protocol processor; the third processor performing signal processor on vectors as stated above in the rejection with respect to claim 14.

For example, in the broadest interpretation of the claim, el. 27 or 28 fig. 3 and col. 41, line 31 and et seq. of Paneth reads on the processor performing management

Art Unit: 2186

and vocoder signal processing limitation of the claim; el. 29, fig. 3 of Paneth reads on the processor performing protocol processing limitation of the claim; and fig.3, el. 33 or 30a or fig. 25, el. 154; col. 71, line 64 and et seq. of Paneth reads on the processor performing signal processor on vectors limitation of the claim.

13. In the remark, the applicants argued that Paneth 's fig. 3 fails to teach a cellular radio, comprising: a first processor for performing management and vocoder signal processing; the second processor performing protocol processing; the third processor being a dedicated processor of the array type as required by claim 15.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). For this case, the combination of Paneth, Barnes, and Mano teach the main processor of the cellular radio; the second processor performing protocol processor; the third processor performing signal processor on vectors as stated above the rejection with respect to claim 15.

For example, in the broadest interpretation of the claim, el. 27 or 28 fig. 3 and col. 41, line 31 and et seq. of Paneth reads on the processor performing management and vocoder signal processing limitation of the claim; el. 29, fig. 3 of Paneth reads on the processor performing protocol processing limitation of the claim; and the

Art Unit: 2186

combination of Paneth, Barnes, and Mano reads on the processor being a dedicated processor of the array type limitation of the claim as stated above the rejection with respect to claim 15.

14. In the remark, the applicants argued that Barnes discloses a cellular mobile telephone system not just a cellular radio.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

In response to applicant's argument, the combination of Paneth and Barnes teach a cellular radio as stated above. Also, the examiner fails to see why the applicant said that Barnes disclosed a cellular mobile telephone system not just a cellular radio. Barnes teaches a cellular radio (e.g., abstract, line 1 and et seq.)

15. In the remark, the applicants argued that applicant fails to see how the deficiency (cellular) of Paneth can be over come by Barnes. The examiner has provided no evidence from the prior art that would motivate one of ordinary skill in the art to combines Barnes with Paneth.

Art Unit: 2186

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Paneth does not explicitly show the use of cellular. Barnes, e.g., abstract, lines 1-4, is shown as an example that a cellular radio being well known in the art. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have a cellular radio to the system of Paneth because it would allow distribution of many of the control functions to cell stations associated with cells; thereby, monitoring and voice communication functions provides both security from interrupted service and significant reduced costs ( Barnes col. 1, lines 53-63).

16. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not

Art Unit: 2186

mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Denise Tran whose telephone number is (703) 305-9823.

The Examiner can normally be reached on Monday and Thursday from 8.30 a.m. to 6.00 p.m.


If attempts to reach the examiner by telephone are unsuccessful the examiner's supervisor Matt Kim can be reached on (703)305-3821. The fax phone number for this group is (703)305-9731.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-9600.

DT

Denise Tran

6/16/02

  
MATTHEW KIM  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2100